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FILEID**STRUCDEF

SSSSSSSS	TTTTTTTT	RRRRRRRR	UU	UU	CCCCCCCC	DDDDDDDD	EEEEEEEEE	FFFFFFFFF
SSSSSSSS	TTTTTTTT	RRRRRRRR	UU	UU	CC	DD	EE	FF
SS	TT	RR	RR	UU	CC	DD	EE	FF
SS	TT	RR	RR	UU	CC	DD	EE	FF
SS	TT	RR	RR	UU	CC	DD	EE	FF
SSSSSS	TT	RRRRRRRR	UU	UU	CC	DD	EE	FFFFFFF
SSSSSS	TT	RRRRRRRR	UU	UU	CC	DD	EE	FFFFFFF
SS	TT	RR	RR	UU	CC	DD	EE	FF
SS	TT	RR	RR	UU	CC	DD	EE	FF
SS	TT	RR	RR	UU	CC	DD	EE	FF
SS	TT	RR	RR	UU	CC	DD	EE	FF
SSSSSSSS	TT	RR	RR	UUUUUUUU	CCCCCCCC	DDDDDDDD	EEEEEEEEE	FF
SSSSSSSS	TT	RR	RR	UUUUUUUU	CCCCCCCC	DDDDDDDD	EEEEEEEEE	FF

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RRRRRRRR	EEEEEEEEE	QQQQQQ		
RRRRRRRR	EEEEEEEEE	QQQQQQ		
RR	RR	EE	QQ	QQ
RR	RR	EE	QQ	QQ
RR	RR	EE	QQ	QQ
RR	RR	EE	QQ	QQ
RRRRRRRR	EEEEEEE	QQ	QQ	
RRRRRRRR	EEEEEEE	QQ	QQ	
RR	RR	EE	QQ	QQ
RR	RR	EE	QQ	QQ
RR	RR	EE	QQ	QQ
RR	RR	EE	QQ	QQ
RR	RR	EEEEEEEEE	QQQQ	QQ
RR	RR	EEEEEEEEE	QQQQ	QQ

STRUCDEF -- DECLARATION FILE FOR DATA STRUCTURE DEFINITION
AND ACCESS MACROS USED IN THE VAX DEBUGGER

Version: 'V04-000'

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WRITTEN BY

Bert Beander August, 1981.

MODULE FUNCTION:

This REQUIRE file contains all macros used in defining and accessing
data structures (BLISS BLOCKs) in the VAX Debugger. These symbolic
names should always be used in BLISS Field-References.

DATA STRUCTURE DEFINITION AND ACCESS

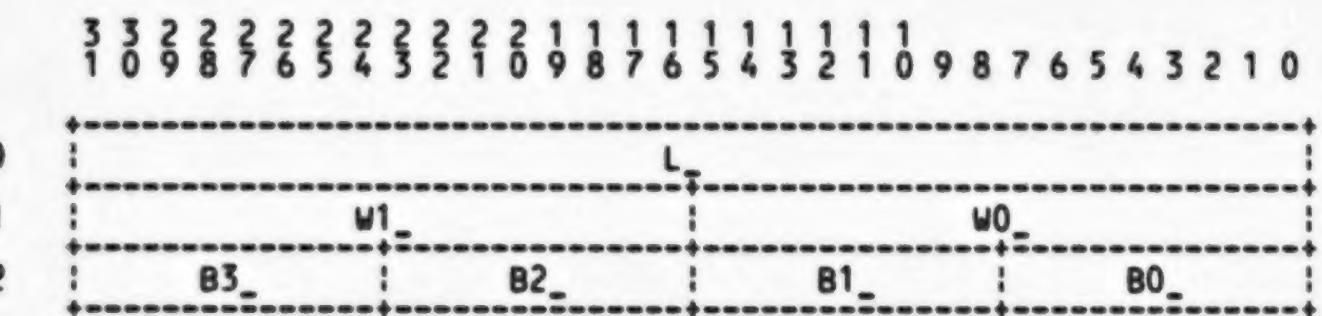
The following macros must be used in defining field names for all data structures in the Debugger. These macros supply the position, size, and sign-extension values when used in FIELD declarations for BLOCK and BLOCKVECTOR data structures. The various generic forms (as specified by the letters in the names) are as follows:

A	Materialized address
L	Longword
W	Zero-extended word
B	Zero-extended byte
V	Zero-extended bit field
SW	Sign-extended word
SB	Sign-extended byte
SV	Sign-extended bit field

The "A" form should be used whenever the field being defined is such that only the address of the field may be materialized in a structure reference; that is, fetch and store operations on the field are not valid. An example of such a field is an ASCII string.

Each of the "V" and "SV" forms take one or two parameters. The first parameter is the bit position within the longword (or byte) and the second is the field size in bits. The second parameter is optional; if omitted, it defaults to 1. Thus V_(5) means bit 5 while V_(5,3) means the 3-bit field starting at bit 5 and ending at bit 7. Bit positions are counted from the low-order (least significant) end of the longword, starting at zero.

The following data structure picture shows the locations of the various fields that can be specified. Note how the bit positions are numbered along the top of the illustration.



1

A_	= 0, 0, 0 %.	: Address of a longword
A0_-	= 0, 0, 0 %.	: Address of byte 0
A1_-	= 8, 0, 0 %.	: Address of byte 1

A2_-	= 16, 0, 0 %;	: Address of byte 2
A3_-	= 24, 0, 0 %;	: Address of byte 3
L_-	= 0, 32, 0 %;	: Longword
W_-	= 0, 16, 0 %;	: Word, zero-extended
B_-	= 0, 8, 0 %;	: Byte, zero-extended
W0_-	= 0, 16, 0 %;	: Word 0 zero-extended
W1_-	= 16, 16, 0 %;	: Word 1 zero-extended
B0_-	= 0, 8, 0 %;	: Byte 0 zero-extended
B1_-	= 8, 8, 0 %;	: Byte 1 zero-extended
B2_-	= 16, 8, 0 %;	: Byte 2 zero-extended
B3_-	= 24, 8, 0 %;	: Byte 3 zero-extended

V_(P,S) = P, %IF %NULL(S) %THEN 1 %ELSE S %FI, 0 %, ! Unsigned bit field

V0_(P,S)	= P, %IF %NULL(S) %THEN 1 %ELSE S %FI, 0 %, ! Bits in B0-
V1_(P,S)	= (P+8), %IF %NULL(S) %THEN 1 %ELSE S %FI, 0 %, ! Bits in B1-
V2_(P,S)	= (P+16), %IF %NULL(S) %THEN 1 %ELSE S %FI, 0 %, ! Bits in B2-
V3_(P,S)	= (P+24), %IF %NULL(S) %THEN 1 %ELSE S %FI, 0 %, ! Bits in B3-

SW_-	= 0, 16, 1 %;	: Word, sign-extended
SB_-	= 0, 8, 1 %;	: Byte, sign-extended
SW0_-	= 0, 16, 1 %;	: Word 0 sign-extended
SW1_-	= 16, 16, 1 %;	: Word 1 sign-extended
SB0_-	= 0, 8, 1 %;	: Byte 0 sign-extended
SB1_-	= 8, 8, 1 %;	: Byte 1 sign-extended
SB2_-	= 16, 8, 1 %;	: Byte 2 sign-extended
SB3_-	= 24, 8, 1 %;	: Byte 3 sign-extended

SV_(P,S)= P, %IF %NULL(S) %THEN 1 %ELSE S %FI, 1 %, ! Signed bit field

SV0_(P,S)	= P, %IF %NULL(S) %THEN 1 %ELSE S %FI, 1 %, ! Bits in B0-
SV1_(P,S)	= (P+8), %IF %NULL(S) %THEN 1 %ELSE S %FI, 1 %, ! Bits in B1-
SV2_(P,S)	= (P+16), %IF %NULL(S) %THEN 1 %ELSE S %FI, 1 %, ! Bits in B2-
SV3_(P,S)	= (P+24), %IF %NULL(S) %THEN 1 %ELSE S %FI, 1 %, ! Bits in B3-

! END OF STRUCDEF.REQ

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VAX/VMS V4.0

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